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clinical practice

Hair tourniquet syndrome: revisited

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SUMMARY: **Hair tourniquet syndrome: revisited.**

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Hair tourniquet syndrome is a rare condition. It is an important emergency condition where urgent attention is needed. In this condition, body appendages are strangulated by hair that acts like a tourniquet. A strand or strands of hair act like a circumferential constriction band and subsequently strangulate the body appendages. Commonly affected sites include fingers, toes or even genitals. Failure to identify and release the acute constriction may result in amputation of affected body part. We report two cases of hair tourniquet syndrome of the thumb and toe that were successfully released without complications.

KEY WORDS: Hair tourniquet syndrome.

Introduction

Hair tourniquet syndrome is a rare condition. It is an important emergency condition where urgent attention is needed. In this condition, body appendages are strangulated by hair that acts like a tourniquet. A strand or strands of hair act like a circumferential constriction band and subsequently strangulate the body appendages. Commonly affected sites include fingers, toes or even genitals. Failure to identify and release the acute constriction may result in amputation of affected body part. We report two cases of hair tourniquet syndrome of the thumb and toe that were successfully released without complications.

Case 1

A 3-month old girl was brought to the emergency department with complains of swelling over her left thumb, which was noticed by her mother. She had mistakenly thought the constriction was a normal finger crease. The child was irritable and fretful.

Examination revealed congestion over the distal aspect of the thumb, starting 5mm proximal from the distal crease. Circumferential constriction band was seen at the affected area (Figure 1). Thumb appear congested distal to constriction. Further assessment revealed hair strands constricting the right thumb with part of the hair strand embedded into the skin. Multiple strands of hair were removed using Killner forcep (Figure 2). The congestion disappears almost immediately. After the release the constriction, the child became calm and comfortable. She was monitored for 24 hour after the release. Follow-up review 3 months later revealed no complications.

Case 2

A 5-month old boy was referred to the orthopaedic team in the emergency department. He was brought to the hospital after his mother noticed that his left third toe appeared swollen and congested two days prior to presentation. The mother noticed that there were strands of hair encircling the toe which formed a constriction band (Figure 3). She removed the visible constricting hair but the congestion is not get any better. Two days later, the surrounding skin of the constriction mark became oedematous and foul smelling. Upon arrival to the emergency department, attempts were made to re-

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Fig. 1 - Left thumb appears congested.

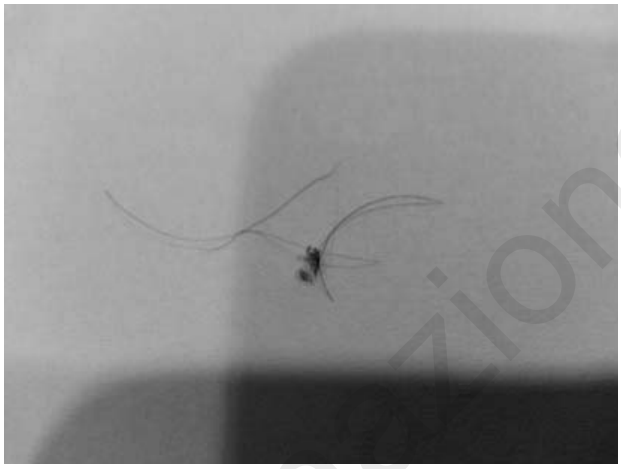

Fig. 2 - Multiple strand of hair makes multiple constriction bands.

move the constriction but to avail, as the child was not cooperative.

Examination under general anaesthesia revealed strands of hairs partially embedded into the skin and were successfully removed. The congestion reduced and the patient was discharge two days post-operatively. Three months follow revealed no complications.

Discussion and conclusion

Hair tourniquet syndrome has been reported as early as 1850 (1, 2). It is reportedly seen among infant, toddler and even adolescent. Reports of hair tourniquet syndrome involve various body parts including fingers, toes, clitoris, labia and penis (1, 2, 5, 6). This syndrome is cause by a strand or strands of hair strangulating various body parts. This will later lead to gangrene of the affected body part if left unrecognized and untreated.

The occurrence is usually seen during the infancy period. It is believe to be contributed by abundant hair from postpartum maternal hair loss. This is because after childbirth, the increase of hair shedding is due to the reduced in hormonal stimulation to the scalp. This phenomenon called as telogen effluvium (4). It may last between two to six month postnatal, the period where this syndrome would most likely occur.

Hair is a known elastic material. It may crumple when wet and after the body part is dry it will strangulate the appendages. Due to it elasticity, it will slowly cut through the oedematous skin surrounding skin. Secondary infection will further worsen the condition (3, 4).

As the skin turns oedematous and re-epithelialization of the wound, the strand or stands of hair are often missed. The practice of wearing mittens and socks to the infant may contribute to the condition and further the delay its recognition and treatment (3).

Fig. 3 - A deep constriction ring is seen in the third left toe with congestion.

Children would be irritable and inconsolable. Examination in the emergency department may carry a risk of incomplete removal of the strangulation, as patient may not be cooperative. Most of the time, the affected child would be will straining and makes examination difficult. One should always bear in mind that it could be due to more than one strand of hair (6). The ideal exa-

mination should be performed under general anaesthesia. In cases of incomplete removal, one should always think of buried constricting hair. A longitudinal incision can be made over the constriction band to make sure that the strangulation is completely release. Incision can be made at the dorsal anteromedial or anterolateral of the finger (5, 6). After removal, the children should be monitored. There will be tremendous improvement of symptoms once it is completely removed.

Although this condition is rare, it is important to highlight the seriousness of this acute appendage loss threat especially among the front liners of medical providers. Early detection and prompt treatment may prevent decapitating injuries.

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